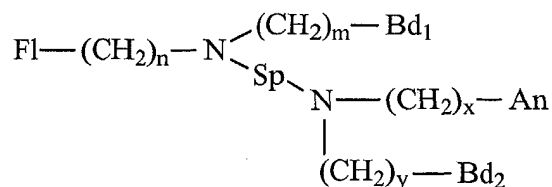


33. (Amended) A method of labeling solid substrates, comprising:

(a) providing a solid substrate;

(b) providing the modular fluorescence sensor having the following general

formula:



wherein:

Fl is a fluorophore;

N is a nitrogen atom;

Bd₁ and Bd₂ are independently selected binding groups, wherein the binding groups are capable of binding an analyte molecule to form a stable 1:1 complex;

Sp is an aliphatic spacer;

n, m, x, and y are integers, where n = 1 or 2, m = 1 or 2, and y = 1 or 2; and

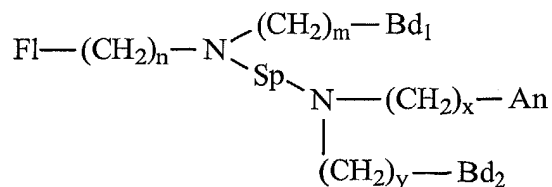
An is an anchor group capable of being attached to the solid substrate;

(c) reacting the sensor with the solid substrate under a condition sufficient to attach the sensor to the substrate.

Please add new claims 40-60 as follows:

40. (New) A method for detecting an analyte contained in a sample comprising the steps of:

(a) providing a modular fluorescence sensor having the following general formula:



wherein:

Fl is a fluorophore;

N is a nitrogen atom;

B_{d1} and B_{d2} are independently selected binding groups, wherein the binding groups are capable of binding the analyte molecule to form a stable 1:1 complex;

Sp is an aliphatic spacer;

An is an anchor group for attaching the sensor to a solid substrate; and

n, m, x, and y are integers, where n = 1 or 2, m = 1 or 2, and y = 1 or 2;

(b) contacting the sensor with the sample whereby the sensor binds the analyte and generates a detectable analyte signal that is responsive to the analyte concentration in the sample;

(c) detecting the generated analyte signal; and

(d) determining the concentration of the analyte contained in the sample.

41. (New) The method of claim 40, wherein the analyte is selected from the group consisting of saccharides, amino saccharides, and carbonyl saccharides.

42. (New) The method of claim 41, wherein the Sp comprises six carbon atoms and the analyte is glucose.

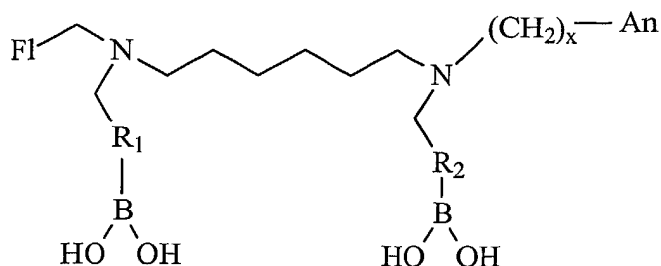
43. (New) The method of claim 40, wherein Fl is selected from the group consisting of naphthyl, anthryl, pyrenyl, phenanthryl, and perylene.

44. (New) The method of claim 40, wherein B_{d1} is R₁-B(OH)₂ and B_{d2} is R₂-B(OH)₂, wherein R₁ and R₂ are aliphatic or aromatic functional groups selected independently from each other and B is a boron atom.

45. (New) The method of claim 44, wherein R₁ and R₂ selected from the group consisting of: methyl, ethyl, propyl, butyl, phenyl, methoxy, ethoxy, butoxy, and phenoxy groups.

46. (New) The method of claim 40, wherein An comprises methyl or phenyl.

47. (New) The method of claim 40, wherein the modular fluorescence sensor has the following general formula:



wherein:

B is a boron atom; and

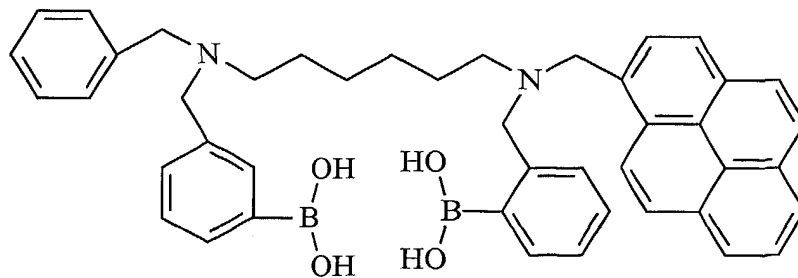
R₁ and R₂ are aliphatic or aromatic functional groups which allow covalent binding of an analyte to the hydroxyl groups forming a stable 1:1 complex, wherein R₁ and R₂ are selected independently from each other.

48. (New) The method of claim 47, wherein Fl is selected from the group consisting of naphthyl, anthryl, pyrenyl, phenanthryl, and perylene.

49. (New) The sensor of claim 47, wherein R₁ and R₂ are independently selected from the group consisting of: methyl, ethyl, propyl, butyl, phenyl, methoxy, ethoxy, butoxy, and phenoxy groups.

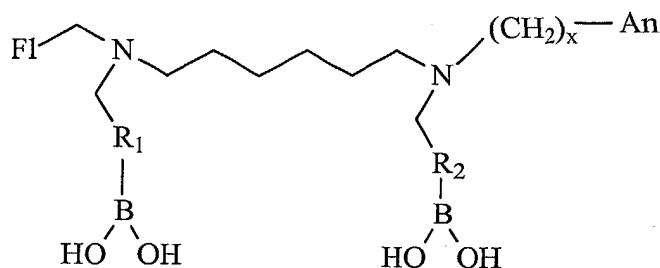
50. (New) The method of claim 47, wherein the analyte is glucose.

51. (New) The method of claim 40, wherein the analyte is glucose and the modular fluorescence sensor has the following general formula:



52. (New) A method for detecting glucose contained in a sample comprising the steps of:

(a) providing a modular fluorescence sensor having the following general formula:



Fl is a fluorophore;

N is a nitrogen atom;

B is a boron atom;

R₁ and R₂ are aliphatic or aromatic functional groups which allow covalent binding of an analyte to the hydroxyl groups forming a stable 1:1 complex, wherein R₁ and R₂ are selected independently from each other;

An is an anchor group for attaching the sensor to a solid substrate; and

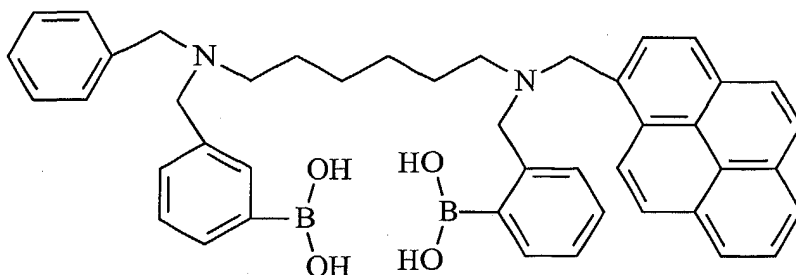
x is an integer.

(b) contacting the sensor with the sample whereby the sensor binds the analyte and generates a detectable analyte signal that is responsive to the analyte concentration in the sample;

(c) detecting the generated analyte signal; and

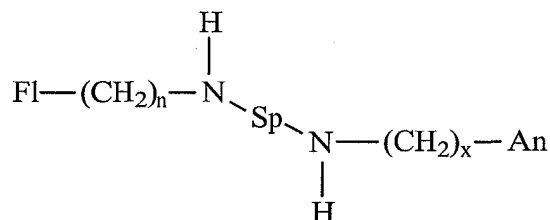
(d) determining the concentration of the analyte contained in the sample.

53. (New) The method of claim 52, wherein the analyte is glucose and the modular fluorescence sensor has the following formula:



54. (New) A method for detecting an analyte contained in a sample comprising the steps of:

(a) forming an asymmetric compound of the following general formula:



wherein:

Fl is a fluorophore;

N is a nitrogen atom and H is a hydrogen atom;

Sp is an aliphatic spacer;

An is an anchor group for attaching the sensor to a solid substrate; and

n = 1 or 2, and x is any integer; and

(b) replacing hydrogen atoms with B_{d1} and B_{d2} groups to form a modular fluorescence sensor, wherein B_{d1} and B_{d2} are independently selected binding groups capable of binding an analyte molecule to form a stable 1:1 complex.

(c) contacting the sensor with the sample whereby the sensor binds the analyte and generates a detectable analyte signal that is responsive to the analyte concentration in the sample;

(d) detecting the generated analyte signal; and

(e) determining the concentration of the analyte contained in the sample.

55. The method of claim 54, wherein Fl is selected from the group consisting of naphthyl, anthryl, pyrenyl, phenanthryl, and perylenyl.

56. The method of claim 54, wherein B_{d1} is R₁-B(OH)₂ and B_{d2} is R₂-B(OH)₂, wherein R₁ and R₂ are aliphatic or aromatic functional groups selected independently from each other, and B is a boron atom.

57. The method of claim 56, wherein R₁ and R₂ selected from the group consisting of: methyl, ethyl, propyl, butyl, phenyl, methoxy, ethoxy, butoxy, and phenoxy groups.

58. The method of claim 54, wherein the step of replacing of hydrogen atoms comprises adding orthobromomethyl phenylboronic acid.

59. The method of claim 54, wherein Sp is a straight-chain alkane.

60. The method of claim 54, wherein An comprises an organic functionality.

REMARKS

Minor changes are made to the specification. Claims 1-21 are canceled without prejudice. Claim 33 amended; marked up version of the amended claim is attached hereto pursuant to 37 C.F.R. § 1.121(c)(ii). New claims 40-60 are added. No new matter is introduced. The support for claims 40-60 can be found on page 8, lines 1-15; page 10, lines 5-26; and page 15, lines 5-21. Claims 22-60 are pending in the application.

Entry of this amendment and examination on the merits of this application is respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number 213-337-6700 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: January 17, 2002

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